



Montana Department of Health and Environmental Sciences  
MONTHLY ACTIVITIES REPORT OF THE AIR QUALITY BUREAU

April 1977

STATE DOCUMENTS  
AUG 9 '77

1. Highlights

Depositions taken April 19 by Flathead County Attorney's office regarding pending legal action by this Bureau against the Flathead County commissioners.

HB 250 (Health Study) was passed by the legislature.

2. Ambient Air Quality Network

Standards Exceeded:

The Anaconda Company reported 80 violations of state SO<sub>2</sub> ambient air quality standards in April. Sixty-nine were violations of the state one hour standard, seven were of the state 24 hour standard, two were of the federal 24 hour standard and two were of the federal three hour standard.

TSP\* - Anders Res., Columbia Falls, 3 excur. Fed 24-hour std.

Sherman Res., Kalispell, 2 excur. Fed. 24-hour std.

Anders Res., Columbia Falls, 1 excur. MT 24-hour std.

SO<sub>2</sub> - Microwave, E. Helena, 5 excur. MT 1-hour std.

Saddle Mountain, E. Helena, 4 excur. MT 1-hour std.

Laural, 4 excur. MT 1-hour std.

Hydrocarbons -

Billings, 20 excur. Fed. std.

CO - Missoula, 4 excur. Fed. std.

\* Total suspended particulate

Air Stagnation Advisories:

No Air Stagnation Advisories were issued during April.

Laboratory Status:

Total determinations for the month - 136

Total samples for the month - 112

Developments:

Routine maintenance and calibration of analyzers carried out.

Great Falls air pollution laboratory evaluated.

Revised and issued new calibration procedures for the CO analyzer. New calibration rules are now in effect.

3. Permits and Tax Credits



Construction Permits:

Applications

Federal Bentonite, Valley County, bentonite drying plant  
Montana Department of Highway, Hill County, portable asphalt hot mix plant  
Meyer Construction Co., Powell County, portable asphalt hot mix plant  
Cook and Klabunde, Gallatin County, gas incinerating toilet  
Montana Light and Power Co., Lincoln County, venturi scrubber on boiler no. 9  
Montana Light and Power Co., Lincoln County, venturi scrubber on boiler no. 7  
Pfizer Inc., Beaverhead Co., replacement of dust collectors  
Spring Creek Forest Products, Inc., Wheatland Co., teepee burner

Approved

Pioneer Ready-Mix, Gallatin County, portable hot mix asphalt plant and portable gravel crushing plant  
Decker Coal Company, Big Horn County, coal handling facility  
Cook and Klabunde, Gallatin County, gas incinerating toilet  
Meyer Construction Company, Powell County, portable asphalt hot mix plant  
Montana Department of Highways, Hill County, portable asphalt hot mix plant  
Mortensen Construction Co., Teton County, portable gravel crushing plant  
Mortensen Construction Co., Lewis and Clark County, portable gravel crushing plant  
Mortensen Construction Co., Chouteau County, portable gravel crushing plant  
Continental Oil Company, Yellowstone County, sour water stripper vent incinerator  
Pfizer Inc., Beaverhead, replacement of dust collectors

Operating Permit:

Hoerner-Waldorf, Missoula, #3 lime kiln extension, \$160,000 (approval of final installation and operation details)

Tax Credits:

Anaconda Co., Anaconda, electric furnace, fluid bed roaster and concentrate handling facility, almost all equipment in application approved, \$25,000,000

4. Variance Status

Current Variances:

AAC, Columbia Falls, F<sup>-</sup> and particulate, expires 6/30/77, renewal applied for  
The Anaconda Company, Anaconda, SO<sub>2</sub>, expires 6/30/77, renewal applied for  
ASARCO, Inc., East Helena, SO<sub>2</sub> expires 6/30/77

New or Renewed:

Anaconda's application for a variance from the visibility rule for the smelter has been scheduled for the June Board meeting.

Anaconda's application for a renewal of the variance from the particulate emission rule for the smelter has been scheduled for the June meeting. The need for this extension has disappeared since the last reverberatory furnace was shutdown about March 7.



Anaconda's application for a variance from the particulate emission rule for the foundry at Anaconda has been scheduled for the June Board meeting.

5. Enforcement Actions

Citations:

Al Cadeau, East Helena, open burning in violation of rule S1490 (Open Burning Restrictions)

Black Lumber Co., Lame Deer, teepee burner in violation of rule S14030 (Wood Waste Burners)

ASARCO, Inc., East Helena (26 citations), smelter in violation of Federal 24-hour and 3-hour ambient air quality standard for sulfur dioxide.

Castle Mountain Corp., White Sulfur Springs, teepee burner in violation of rule S14030 (Wood Waste Burners)

Hoerner Waldorf Corporation, Missoula (5 citations) #3 Recovery boiler in violation of rule S1400 (Permits, Construction and Operation of Equipment)

Notices of Violation:

None

Order for Corrective Action:

None

Court Actions:

The Department has filed suit against Lake, Lincoln, Sanders, and Flathead Counties to prohibit them from allowing open burning without a permit. Summons served on Lake County Commissioners April 11, 1977, regarding open burning issue.

The district judge from Libby should rule on the Lincoln County case by May 13, 1977.

6. Tepee Burner and Open Burning

The Board Meeting on the open burning rule is set for June 27.

Tepee Burner Status:

No. at Start	39
New Starts	0
Shutdowns	0
No. at End	39



Open Burning Permits:

Kalispell Office	142	Sanders County	22
Cascade County	54	Yellowstone County	332
Lake County	131	Rest of State	2971
Missoula County	586	Total Permits	3938

7. Source Tests Performed

Agency Source Tests:

None

Non-Agency Source Tests:

Hoerner-Waldorf, Missoula, 16 tests on recovery boilers, lime kilns, slakers, smelt tanks and hogged fuel boiler - all in compliance.

MDU, Lewis and Clark Power Station, Sidney, test observed by AQB staff.

8. Field Investigations

Belton Livestock, West Glacier, routine inspection  
Flathead Co. Refuse Disposal Site, Kalispell, wood pile inspection  
Burlington Northern, Missoula/Trout Creek, right-of-way burning  
U. S. Gypsum, Heath, inspection and opacity observation  
Wolf Point Oil Refinery, Wolf Point, inspection and opacity observation  
Anaconda Aluminum, Columbia Falls, potline, compliance meeting schedule  
W. R. Grace, Libby, vermiculate plant, in compliance  
St. Regis Paper Co., Libby, boiler and veneer dryers, dryers in compliance, boiler meeting compliance schedule.  
Evans Products, Missoula, veneer dryers, boiler, sander, boiler and dryers in compliance, sander cyclone to be tested  
Louisiana Pacific, Missoula, particleboard plant, meeting compliance schedule  
Hoerner Waldorf, Missoula, recovery boilers in compliance, also observed lime kiln source test.  
ASARCO, Inc., baghouse, zinc plant, sinter stacks, visual observation  
Phillips Petroleum, Great Falls, inspection and opacity observation  
Con Agra grain mill, Great Falls, inspection  
Berkeley Pit, crusher and concentrator, inspection  
Westco refinery, Cut Bank, inspection  
Westmoreland Resources, Inc. Sarpy Creek, coal handling facility, inspection  
Eastmont Forest Products, Ashland, inactive sawmill  
Black Lumber Co., Lame Deer, sawmill, inspection  
Peabody Coal Co., Decker, coal handling facility, inspection  
Western Energy Co., Colstrip, coal handling facility, inspection  
Montana Power Co., Colstrip, coal handling facility, inspection  
Decker Coal Co., Decker, coal handling facility, inspection  
Montana State, Crow Agency, portable batch plant, inspection  
Kennebec Copper Co., Garfield, Utah, inspection  
Inspiration Consolidated Copper Co., Miami, Arizona





Phelps Dodge Corporation, Morenci, Arizona, inspection  
ASARCO, Hayden, Arizona, inspection  
Kennecott Copper Co., Hayden, Arizona  
Magma Copper Co., San Manuel, Arizona, inspection  
Exxon, Billings, inspection  
Cenex, Billings, inspection  
Holly Sugar, Billings, inspection  
Montana Power Co., Corette plant, Billings, inspection  
MDU, Lewis and Clark Power Station, Sidney, inspection  
Farmers Union GTA, Glendive, inspection and opacity observation  
Brand S Lumber, Livingston, inspection and opacity observation  
Burkland Studs, Livingston, inspection and opacity observation  
Yellowstone Pine, Belgrade, inspection and opacity observation  
Park Lumber, Livingston, inspection and opacity observation  
Willow Creek Lumber, Livingston, inspection and opacity observation  
Castle Mountain Corporation, White Sulfur Springs, inspection and opacity observation  
MDU, Miles City, inspection  
Peavy Co., Miles City, inspection and opacity observation  
Peavy Co., Glendive, inspection and opacity observation  
Cyprus Industrial Minerals, Three Forks, inspection and opacity observation  
Kaiser Cement, Montana City, inspection  
Anaconda Co., Butte, crusher and concentrator, inspection  
Montana Pole, Butte, inspection, excessive emissions  
Kenco Refinery, Wolf Point, inspection  
Trident Talc, Three Forks, inspection

9. Complaints

Belton Livestock Co., odor complaint, no cause for action  
Hog farm, Fallon, odors, corrected  
Al Cadeau, East Helena, open burning without permit, citation issued  
Tremper Drive, Milltown, dust from unpaved road, under investigation

10. Data Processing Services

Ambient Data Summary:

Monthly report of March air quality data attached.

Emissions Inventory:

Several updates to the inventory were received from AQCR 142 and 144. One program was replaced on the system.

Prevention of Significant Deterioration:

Wrote one letter to a person in Noxon, Montana, answering a request for procedures pertaining to redesignation of area classifications.



Modeling:

A significant portion of time was spent in the diffusion modeling analysis of Billings AQMA SO<sub>2</sub>. An analysis was written and submitted to staff for comments. Work was performed in revising the box model for a particulate analysis of Missoula.

11. Environmental Impact Statement

Agency Impact Determinations:

None

Other Agency EIS's Reviewed:

None

12. Status of Studies, Contracts and Reports

Health Study Phase I - EPA in Research Triangle Park is reviewing the data submitted by the Bureau of Records and Statistics.

Health Study Phase II - Funding is approved for this phase but we are waiting for EPA to finish reviewing the data from Phase I.

HB 250 - This air pollution-morbidity study bill was passed by the Legislature. Work currently being done on the exact study design.

Comments were submitted to John Green, EPA, on the Phase II analysis section of the Poplar River study.

ASARCO Troy Project, background study, sampling station set up.

Person hired to evaluate copper smelter technologies and reports submitted by The Anaconda Co. His report is due to be submitted in late May.

Work continued on S.E. Coal Area; Billings CO and TSP; and Missoula TSP AQMA's.

Public information program for AQMP's - consultant should be hired in the near future to work on this.

Montana Power Company, Colstrip ambient monitoring - study just begun, goals are to detail what should be monitored, where, intensity and bring them to a common data reporting format.

13. Schools and Trailing

Calibration seminar held April 5, 6 and 7. Representatives from both industry and local agencies attended.

Solar Energy Seminar, April 28, Helena

Smoke School, April 5 and 7, Helena.



14. Public Hearings and Meetings

Public Hearings:

Senate hearing on the HB 250 Health Study on April 12.

Meetings Attended:

Western Energy Quality Assurance meeting, Denver  
Montana Chapter of the American Statistical Association in conjunction with  
the Montana Academy of Sciences, Helena  
Montana Airshed meeting, Kalispell  
Hazardous Material Response Team, Helena  
DNR, Circle West strip-mine monitoring  
Lewis and Clark Co. personnel, open burning permit system, Helena  
Hoerner Waldorf, citations, Helena  
Butch Rachal, EPA, local programs, Helena  
EPA reps., grant commitments, Helena  
Lincoln Co. sanitarian, ASARCO Troy project, Libby  
Evans Products, source testing, Missoula  
Energy Advisory Commiccion, Helena  
Westmoreland Resources, construction permits, Sarpy Creek  
Highway Impact Evaluation Group, Helena  
Missoula TSP AQMA, Missoula  
Dr. Cook, Eastern Montana College, re. Cenex statistical analysis, Billings  
Holly Sugar personnel, re. rotary dryer control program, Billings

Intra-Staff Meetings:

Staff meeting for state and local staff, Helena  
Meteorological study, Columbia Falls  
Billings AQMA SO<sub>2</sub>, Helena  
Mid-year evaluation, Helena  
Equipment maintenance & calibration, Helena  
Billings SO<sub>2</sub>, Helena  
EPA, contract commitment progress report, Helena

15. Public Information Requests

Rules - 11  
Clean Air Act - 3  
General Information - 5

16. Fiscal Status

Grants Received:

None



Monthly Report of Activities  
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April 1977

Monthly Expenditures:

Program	Budget	Expenditures		Funds Remaining
		April	Year to Date	
0630	450,676	34,465	345,266	103,203
0631	74,400	23,920	56,065	18,336
0633	73,999	17,456	60,825	11,532
0637	101,200	849	59,472	41,728
0681	76,300	3,711	47,548	28,752





## MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

## MONTHLY SUMMARY OF AIR QUALITY DATA

March 1977

Pollutant: Total Suspended Particulate Units: Mg/cubic meter							
AREA		HIGH READING			ARITHMETIC AVER.		
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mon. of Data	Comments
140	Morton Res. Big Horn Co. Warren Ranch Big Horn Co. Lockwood School Billings KSHL Billings City Hall Billings Grand Ave. Sch. Billings Burnstead Drive Billings Laurel Jr.-High Laurel	148 15 109 74 151 52 467 39 78	148 15 109 74 151 74 467 39 129	208 15 146 141 151 135 1117 108 129	43.4 9.1 39.4 28.6 63.2 35.3 154.3 29.1 38.2	3 3 3 3 3 3 3 3 3	1 excur. MT 24-hr. std.
141	Hospital Roof Great Falls Fire Sta. #1 Great Falls	52	869	869	97.4	3	
142	Sil. Bow Gen. Hos Butte Aikins Res. Butte Richer Res. Butte Hwy Jct. Anaconda McKinley Res. Granite Co.	63 53 17 121 37	210 130 46 121 90	210 182 46 250 147	89.4 54.6 21.8 43.9 35.0	3 3 3 3 3	

Pollutant: Total Suspended Particulate Units: Mg/cubic meter							
AREA		HIGH READING			ARITHMETIC AVER.		
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mon. of Data	Comments
142	Microwave Jefferson Co. 212 Pacific Ave Lewis & Clark Co. Tiernan Res. Silver Bow Co. Littlerfield Htl Miles City Glendive Dawson County Ft. Peck McCon Co. Broadus Pow. Riv. Co. BN Site Colstrip McRae Site Colstrip	14 149 26 27 18 40 51	52 149 64 27 102 91 51	66 187 64 87 102 91 62	18.0 68.8 35.2 11.4 25.1 27.3 14.3	3 3 3 3 2 3 3	
144	High School Columbia Falls Courthouse Missoula J. B. Field Missoula Co. Frenchtown Missoula Co.	172 147 73 165	172 295 140 165	294 342 214 165	68.5 114.9 55.4 49.1	3 3 3 3	1 Excur. Fed. Prim. Std. 1 Excur. Fed. Primary Std.

\*No Data - Equipment Down

Pollutant: Miscellaneous Continuous Data Units: Parts Per Million							
AREA		HIGH READING			ARITHMETIC AVER.		
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mon. of Data	Comments
140	Carbon Monoxide 11th & S. 27th Billings						
144	27th & Montana Billings Malfunction Jct. Missoula	1.75	1.75	1.75	0.496	2	
140	Hydrocarbons 27th & Montana Billings	4.80	4.80	10.20	1.905	3	
143	BN Site Colstrip	1.50	2.70	3.50	1.577	3	
143	Methane Hydrocarbons BN Site Colstrip	1.50	2.20	2.20	1.591	3	
143	Non-Methane Hydrocarbons BN Site Colstrip	0.30	0.50	2.00	0.013	3	
143	Nitric Oxide BN Site Colstrip						
140	Nitrogen Dioxide 27th & Montana Billings						
142	Alpine West Butte	154	154	154	0.022	1	20 Excur. Fed. Primary Std.
143	BN Site Colstrip						

\*No Data - Equipment Down

Pollutant: Miscellaneous Continuous Data Units: Parts Per Million							
AREA		HIGH READING			ARITHMETIC AVER.		
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mon. of Data	Comments
143	Oxides of Nitrogen BN Site Colstrip						
140	Ozone 27th & Montana Billings	0.04	0.04	0.10	0.015	3	
143	BN Site Colstrip						
140	Sulfur Dioxide 27th & Montana Billings Laurel Farm Billings Laurel Water Pk Billings	0.01 0.55	0.09 0.61	0.15 0.80	0.002 0.078	3 3	4 Excur. Fed. Primary Std.
142	East Stack E. Helena Microwave E. Helena Saddle Mountain E. Helena C-Hill Anaconda Hwy Junction Anaconda Mill Creek Post Office Anaconda Copper Bldg. Helena	0.25 0.18 0.16 0.22 0.16 0.22 1.33 0.88 0.56 0.40	0.25 0.22 0.48 1.00 0.56 1.00 1.46 0.88 0.56 0.40	0.44 1.08 0.56 2.54 0.015 1.36 1.02 0.006	0.012 0.011 0.015 0.005 0.017 0.007 0.006	3 3 3 3 3 3 3 3	1 Excur. MT 1-hr. std.
143	BN Site Colstrip	0.03	0.03	0.03	0.000	3	

\*No Data - Equipment Down



MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES  
MONTHLY SUMMARY OF AIR QUALITY DATA  
March 1977

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Pollutant: Miscellaneous Indicators Units:

AREA		HIGH READING			ARITHMETIC AVER.		
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mon. of Data	Comments
142	FLUORIDE PAPERS	- mg/sq.	cm./30 days				
	Mullenburg	0.060	0.050	0.200	0.050	3	
	Powell County						
	Lahman's	0.040	0.040	0.08	0.035	3	
	Powell County						
	N Ac Hwy	0.050	0.050	0.110	0.050	3	
143	Powell County						
	Ramsay West			***			
	S11. Bow County			***			
	ESE Stauffer			***			
	S11. Bow County			***			
	BN Site			***			
144	Colstrip						
	McRae Site			***			
	Colstrip			***			
	Oehlborn's Mt.Box	0.170	0.720	1.710	0.413	3	
	Flathead Co.			***			
	Anaconda South			***			
142	FLUORIDE PLATES	- mg/sq.	cm./30 days				
	Glac. Park #1	0.270	0.330	0.580	0.280	3	
	Glac.Natl.Park						
	Glac. Park #2	0.500	0.500	0.580	0.447	3	
	Glac.Natl.Park						
142	Durant Canyon						
	Deer Lodge Co.	0.0	0.110	0.110	0.055	3	
	N Ac Hwy						
	Powell County	0.0	0.060	0.060	0.030	3	
	NW on Hill						
	Powell County						

\*\*\*Data not available at time of report

Pollutant: Miscellaneous Indicators Units:

AQCR	AREA	HIGH READING			ARITHMETIC AVER.			Comments
	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mths. of Data		
142	Ramsay West			---				
	S11. Bow Co.			---				
143	ESE Stauffer			---				
	S11. Bow Co.			---				
144	BN Site			---				
	Colstrip			---				
144	McRae Site			---				
	Colstrip			---				
144	Teakettle #10			---				
	Flathead Co.			---				
144	Teakettle #6	0.530	0.530	18.670	0.530	3		
	Flathead Co.							
144	Anaconda South	2.020	5.000	8.820	2.810	3		
	Flathead Co.							
144	Glac. Park #1	0.440	0.610	0.720	0.500	3		
	Glac.Natl.Park							
144	Glac. Park #2	0.700	0.710	0.810	0.670	3		
141	OUTFALL - Tons/sq. m.							
	Mountain States	22.69	48.15	48.15	30.98	3		
141	Great Falls							
	Fire Sta. #1	10.14	23.75	27.02	16.94	3		
141	Great Falls							
140	SULFATION RATE - mg O <sub>3</sub> /100 sq. cm.							
	3/8 Mt. NE Coop	2.440	4.380	4.800	3.410	3		
140	Billings							
	East of Laurel	1.750	3.220	2.490	2.490	3		
140	Billings							
	H1-Ball Trucking	1.190	1.190	1.410	1.185	3		
140	Billings							

\*\*\*Data not available at time of report  
\*\*\*Site no longer in operation

Pollutant: Miscellaneous Indicators Units:

AREA		HIGH READING			ARITHMETIC AVER.		
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mon. of Data	Comments
141	Stock Car Track			---			
	Great Falls						
	Phillips Ref. E	0.395	0.575	0.575	0.408	3	
	Great Falls						
142	Phillips Ref.N1	0.484	0.629	0.629	0.556	3	
	Great Falls						
	Microwave	0.310	0.650	0.650	0.403	3	
	E. Helena			---			
143	Hiway Jct.						
	Anaconda						
	C-Hill			---			
	Anaconda						
	BN Site			---			
	Colstrip			---			
	McRae Site						
	Colstrip						

\*\*\*Data not available at time of report

Pollutant: Misc. Bubbler Data Units: ppm

AREA		HIGH READING			ARITHMETIC AVER.		
AQCR	Site Location	Current Month	Year-to-Date	Running Year	Year-to-Date	No. of Mon. of Data	Comments
140	SULFUR DIOXIDE	0.0233	0.0431	0.2012	0.0123	3	
	Lockwood Sch.						
	Billings						
143	3/8 Mt. NE Coop	0.0	0.0	0.0	0.0	3	
	Billings						
	Scobey						
	Daniels County	0.0	0.0	0.0	0.0	3	
	Fort Peck						
	McCone Co.						
	Lane Deer						
	Rosebud County						
	BN Site						
	Colstrip						
	McRae Site						
	Colstrip						
143	NITROGEN DIOXIDE	0.0	0.0	0.0	0.0	3	
	Scobey						
	Daniels County						
	Fort Peck	0.0	0.0	0.0	0.0	3	
	McCone County						
	Lane Deer						
	Rosebud County						
	BN Site						
	Colstrip						
	McRae Site						
	Colstrip						
	Colstrip						

